

CLAIMS

*John A1*

1. A sea surface antenna comprising a tube of metallic material, the tube having a substantially longitudinal slot coupled at or near its midpoint to a feed line, the slot being bridged by two pluralities of capacitances to either side of the feedpoint, each plurality being distributed along a respective part of the slot, the antenna being dimensioned so as to operate in an evanescent mode at a resonant frequency less than the cut-off frequency.

2. An antenna according to claim 1 wherein the slot is shorted at each end.

*John A2*

3. A sea surface antenna comprising a tube of metallic material on a dielectric former, the tube having a longitudinal slot coupled at or near its midpoint to a feed line, the slot being bridged by two pluralities of capacitances to either side of the feedpoint, each plurality being distributed along a respective part of the slot, the length of the antenna being less than  $0.25 \lambda$  and the diameter of the antenna being less than  $0.02 \lambda$ , where  $\lambda$  is the free space wavelength at the operating frequency, the antenna being dimensioned so as to operate in an evanescent mode at a resonant frequency less than the cut-off frequency.

4. An antenna according to claim 2 wherein the slot is shorted at each end.

5. ~~An antenna according to claim 4 wherein the capacitances are provided by varactor diodes, the antenna including means for applying a variable bias to the varactor diodes.~~

*a*

6. A sea surface antenna arrangement including two or more like antennas according to claim 1 placed in a colinear configuration and connected electrically in parallel.